SUPPORT FOR THE AMENDMENT

Support for the amendment to Claim 1 is found at page 21, lines 14-16, in the specification. No new matter is believed to be added by the above amendment.

REMARKS

Claim 1 is amended. Claims 1-5, 7, and 10-20 are pending. Favorable reconsideration is respectfully requested.

The new matter rejections and the rejections under 35 U.S.C. § 112, first paragraph, are obviated by the above amendment. More specifically, the phrases "while not containing any other elements selected from an alkali metal," and "not in a batch type production." have been removed. Accordingly, withdrawal of these grounds of rejections are respectfully requested.

The rejections of Claims 1-5, 7, and 10-20 under 35 U.S.C. § 102(b) and/or § 103(a) over Weimer et al. (U.S. '121) alone or in combination with Pratsinis et al. (U.S. '320), Parent et al., Weimer et al. (U.S. '804) are believed to be obviated by the above amendment. Further, the rejections are traversed below.

U.S. '121 discloses, at best, an aluminum nitrite powder having particle diameter of 0.4-0.8 (see column 11, lines 40-46).

In direct contrast, one embodiment of the claimed invention is drawn to an aluminum nitride filler-powder having a particle size that may range from 0.001 to 500 micrometers and a mean particle size that may range from 0.1 to 100 micrometers (see amended Claim 1 above). Further, one embodiment of the claimed invention is that the aluminum nitride filler-powder contains particles that have an external shape that is spherical with a ratio of a long-

axis diameter to the short-axis diameter being more or less 1:1 (see amended Claim 1 above). As correctly indicated by the Examiner at page 6, paragraph 14 of the outstanding Office Action, U.S. '121 fails to disclose that the particles be spherical. Accordingly, U.S. '121 fails to disclose all of the claimed limitations. Therefore, a prima facie case of anticipation cannot be made in view of the disclosure of U.S. '121 and the burden remains on the Examiner to provide such a case.

It appears as if the Examiner is relying on the disclosure of U.S. '320 to establish that aluminum nitride particles are always spherical particles formed at temperatures greater than 1373 K (see pages 6-7 of the outstanding Office Action and column 3, lines 18-36 of U.S. '320). Therefore, the Examiner comes to the conclusion that since the aluminum nitride particles were made by a process disclosed in U.S. '121 at a temperature of approximately 1873 K, all of the particles made therein must be spherical particles (see page 7 of the outstanding Office Action). It should be noted that the Examiner relies on this specific combination at all times to provide a "prima facie case of obviousness" in combination with the other above-mentioned references.

The Examiner has suggested that U.S. '121 and U.S. '320 "inherently" achieved the claimed aluminum nitride powder. However, the Examiner has provided no proof of this. Rather the Examiner is using Applicants' disclosure against them. As noted by the court in In Re Ulrich, 666 F.2d 578, 581, 212 USPQ 323 (CCPA 1981), the mere fact that a certain thing may result from a given set of circumstances is not sufficient to prove inherency. Inherency may not be established by probabilities or possibilities. Something that is inherent must inevitably be the result each and every time.

It is by now well settled that the burden of establishing a prima facie case of anticipation resides with the Patent and Trademark Office. See In Re Piasecki, 745 F.2d

1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984), quoting In Re Warner, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA, 1967).

As noted by the Board of Patent Appeals and Interferences in Ex parte Skinner, 2 USPQ 2d 1788, before an Examiner can switch the burden of proof of showing non-inherency to the Applicant, the Examiner must provide some evidence or scientific reason to establish the reasonableness of the Examiner's belief that the functional limitation is an inherent characteristic of the prior art. In this case, the Examiner has provided no such evidence, because the Examiner has not provided an adequate showing that a spherical shape of aluminum nitride inevitably results each and every time, especially in view of the disclosures of the cited references as discussed below.

For example, the references upon which the Examiner relies to provide a prima facie case of anticipation clearly demonstrate that spherical particles cannot be obtained inevitably each and every time, much less each and every time at a temperature above 1373 K as disclosed and relied upon in U.S. '320. For example, U.S. '121 discloses that even above 1373 K, aluminum nitride particles made therefrom are not particles by agglomerates (see column 9, lines 22-25). Even further in the examples of U.S. '121, this reference discloses that the aluminum nitride made from the process discloses therein forms "light agglomerates" (see column 11, lines 62-68). Moreover, U.S. '320 explicitly discloses that powders produced from a reactor temperature varying from 1673 to 1873 K have hexagonal crystals and that these particles tend to aggregate as well (see column 7, lines 38-56).

In light of the above, clearly U.S. '121 and U.S. '320 disclose that aluminum nitride particles made from processes at a temperature of greater than 1373 K do not inevitably result in aluminum nitride spherical particles each and every time which is required to establish a prima facie case of anticipation based on inherency (see In Re Ulrich discussed above). Therefore, the suggestion that a burden lies on the Applicant to refute a prima facie case of

anticipation is putting the cart before the horse because no prima facie case of anticipation can possibly be sustained in light of the above. Accordingly, withdrawal of this ground of rejection is respectfully requested.

Further, no prima facie case of obviousness can be supported by the above disclosures as well. Clearly, U.S. '121 and U.S. '320 disclose aluminum nitride particles that are agglomerated. The Examiner further relies on the other above-mentioned references to provide what U.S. '121 and U.S. '320 fail to provide.

Parent et al. discloses, at best, that AlM particles are useful for reinforcing many types of matrices, including polymer matrices (see column 7, lines 48-58).

U.S. '804 discloses, at best, a process of forming aluminum nitride powder from a mixture of alumina powder and carbon black in a floating nitridization apparatus at 2173 K (see column 9, lines 5-67). However, the Examiner indicates that U.S. '804 fails to disclose or suggest that the product powder is spherical.

In light of the above, it is clear that both Parent et al. and U.S. '804 fail to provide what U.S. '121 and U.S. '320 fail to disclose or suggest.

The Examiner has indicated at page 13 of the outstanding Office Action that the burden is on the Applicants to show criticality of the process in a product-by-process limitation. However, again the Examiner is putting the cart before the horse. It is clear from the above-mentioned disclosures of the references relied upon by the Examiner fail to provide prima facie cases of anticipation and/or prima facie cases of obviousness. Therefore, there is no burden on the Applicant at the present time and in view of the above-mentioned disclosures. Accordingly, withdrawal of these grounds of rejections are respectfully requested.

Applicants respectfully submit that the present application is now in condition for allowance. Early notice to this effect is respectfully requested. Should anything further be required to place this application in condition for allowance, the Examiner is requested to contact the undersigned by telephone.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER AND NEUSTADT, P.C.

Norman F. Oblon
Registration No. 24,618
Attorney of Record

Thomas W. Barnes
Registration No. 52,595

22850
Tel.: (703) 413-3000
Fax: (703) 413-2220
NFO:TWB/bwt:aps
I:\ATTY\TWB\215271US-AM.DOC

Docket No.: 215217US0

Marked-Up Copy
Serial No: 09/981,766
Amendment Filed on: HEREWITH

IN THE CLAIMS

1. (Amended) A flame synthesized aluminum nitride filler-powder comprising elements Al, O and N, or elements Al and N, wherein the particle size of the powder is from 0.001 to 500 μm, the mean particle size thereof is from 0.1 to 100 μm, the external shape of the particles is spherical with a ratio of the long-axis diameter to the short-axis diameter being more or less 1:1, and the powder is manufactured continuously in a gas phase in the presence of a flame by using as a raw material powder consisting of element Al, or a mixture of a powder consisting of elements Al and O and a powder consisting of element C.